



Program
58th Meeting of the Texas Society for Microscopy
Texas State University - LBJ Student Center Ballroom

Thursday, 22nd of February 2024 - Workshops

Time	Roy F. Mitte (RFM) & Supple Science Building
8:00 a.m. - 9:00 a. m.	Breakfast (sponsored by Evident) RFM 3219
9:00 a.m. - 12:00 p.m.	Workshops - morning sessions
	1.) Confocal Laser Scanning Microscopy with Mariane Martinez (sponsored by Evident - formerly Olympus) Room: Supple 171
	2.) Tip Enhanced Raman Spectroscopy with Andrey Krayev (sponsored by Horiba) Rooms: RFM 2243 (9-10am) & RFM 1203 (10-noon)
	3.) XPS with James Lallo (sponsored by Thermo Fisher Scientific) Rooms: RFM 3240C (9-10am) & RFM 1202 (10-noon)
	4.) STEM-EDS with Lee Casalena (sponsored by Thermo Fisher Scientific) Rooms: RFM 3219 (9-10am) & Supple 171 (10-noon)
12:00 p.m. - 1:00 p.m.	Lunch (sponsored by Horiba & Thermo Fisher Scientific) Room: 3219
1:00 p.m. - 4 p.m.	Workshops - afternoon sessions
	1.) Confocal Laser Scanning Microscopy with Mariane Martinez (sponsored by Evident - formerly Olympus) Room Supple 171
	2.) Tip Enhanced Raman Spectroscopy with Andrey Krayev (sponsored by Horiba) Rooms: RFM 2243 (1-2pm) & RFM 1203 (2-4pm)
	3.) XPS with James Lallo (sponsored by Thermo Fisher Scientific) Rooms: 3240C (1-2pm) & RFM 1202 (2-4pm)
	4.) STEM-EDS with Lee Casalena (sponsored by Thermo Fisher Scientific) Rooms: RFM 3219 (1-2pm) & Supple 171 (2-4pm)
7:00 p.m. - 10:00 p.m.	Industry - Social Reception Industry - American Restaurant - 110 E Martin Luther King Dr #126, San Marcos, TX 78666

Friday, 23rd of February 2024 - Scientific Program

Time	LBJ Student Center Grand Ballroom
8:00 a.m. - 10:00 a.m.	Registration Breakfast
8:00 a.m. - 10:00 a.m. 8:00 a.m. - 10:00 a.m.	LBJ Student Center LBJ Ballroom
	Vendor Setup Poster Setup
8:30 a.m. - 8:45 a.m.	Opening Remarks Josefina Arellano-Jimenez, TSM President Joyce Anderson, Program Chairwoman
8:45 a.m. - 9:35 a.m. <i>Invited Speaker</i>	1st Session; LBJ Center Grand Ballroom Session Chair: Catalina Pislariu
	Finding Ways to Inhibit Traveler's Diarrhea Using Cryo-EM, Image Processing, and other Biophysical Methods <u>Esther Bullitt</u> Boston University, MA
9:35 a.m. - 9:50 a.m. <i>Student Competition</i>	Cancer Cell Targeting via Selective Transferrin Receptor Labeling Using Protein-Derived Carbon Dots <u>Sara Strickland</u> Texas Tech University
9:50 a.m. - 10:10 a.m.	TWU Pollinator Gardens as Significant Sources for Students' Microscopy Projects <u>Camelia Maier</u> Texas Woman's University
10:10 a.m. - 10:25 a.m. <i>Student Competition</i>	Space-Age Solutions: Addressing Microbial Corrosion with AI-Driven Image Analysis <u>Evan Ortiz</u> Texas State University

10:25 a.m. - 10:45 a.m. <i>Corporate Speaker</i>	Machine-Vision Assisted in-situ Transmission Electron Microscopy <u>Gabriela Mendoza</u> Protochips Inc.
10:45 a.m. - 11:05 a.m.	Dynamics of Sheath Protein of a Myoviridae Coliphage during Host Infection Studied using Industry Specific Cloud Computing Resources <u>Anindito Sen</u> Texas A&M University
11:05 a.m. - 11:25 a.m. <i>Corporate Speaker</i>	TERS Imaging: A Unique Technique for Nanoscale Characterization of Structural Peculiarities in 2D Semiconductors and their Lateral and Vertical Heterostructures <u>Andrey Krayev</u> Horiba Scientific
	LBJ Student Center LBJ Ballroom
11:25 a.m. - 12:00 p.m.	Poster Session and Vendor Exhibit
	LBJ Student Center Ballroom
12:00 p.m.- 1:00 p.m.	Lunch and
12:30 p.m.-1:30 p.m.	TSM Business Meeting (Room: LBJ Center Grant Ballroom)
	LBJ Student Center LBJ Ballroom
1:30 p.m. - 3:00 p.m.	Poster Session and Vendor Exhibit
	2nd Session; LBJ Center Grand Ballroom Session Chair: Casey Smith
3:00 p.m. - 3:50 p.m. <i>Invited Speaker</i>	Advanced Transmission Electron Microscopy through Pixelated Direct Electron Detectors <u>Jamie Warner</u> The University of Texas at Austin
3:50 p.m. - 4:05 p.m. <i>Student Competition</i>	Laser Annealing Induced Growth and Characterization of Carbon Nanostructures <u>Saif AA Taqy</u> Texas State University
4:05 p.m. - 4:20 p.m. <i>Student Competition</i>	Effect of State-of-Charge on Particles Ejected from Lithium-Ion Batteries during Thermal Runaway <u>David M Miller</u> Texas A&M University
4:20 p.m. - 4:40 p.m. <i>Corporate Speaker</i>	Investigating 2D-Materials Using Correlative Spectroscopy and Microscopy <u>James Lallo</u> Thermo Fisher Scientific
4:40 p.m. - 4:55 p.m. <i>Student Competition</i>	Large Area Diamond Growth on β-Ga₂O₃ and AlN Using Q-Carbon Interlayer <u>Pallab Kumar Sarkar</u> Texas State University
4:55 p.m. - 5:10 p.m. <i>Student Competition</i>	Synthesis and Microstructural Analysis of FeCoNiCuSi High Entropy Alloy <u>Rakibul Alam Shohan</u> University of Texas at San Antonio
5:10 p.m. - 5:25 p.m. <i>Student Competition</i>	Effect of Annealing on Electrical Property of Platinum Nanowires Deposited by Focused Electron Beam Induced Deposition <u>Rajendra Rai</u> Texas State University
5:25 p.m. - 5:45 p.m. <i>Corporate Speaker</i>	High Spatial Resolution EDS Mapping Using STEM-SEM <u>Sonika Robertson</u> Oxford Instruments
	LBJ Student Center Grand Ballroom
5:45 p.m. - 6:00 p.m.	Student Awards Final and Closing Remarks
	Evening: Off-Site
	Dinner on Your Own



List of Poster Presentations

58th meeting of the Texas Society for Microscopy (TSM)
Texas State University - LBJ Student Center Ballroom

Friday, 23rd of February 2024 from 11:25 a.m. - 12:00 p.m. and 1:30 p.m. - 3:00 p.m.

Time	LBJ Student Center, LBJ Ballroom
8:00 a.m. - 10:00 a.m.	Poster Setup
No.	
1	Evaluation of Structure and Properties of Iridium-Titanium Oxides Synthesized Using High Energy Ball Milling Presenter: Keegan Bailey Texas State University
2	Weathering Effects on Polymeric Azobenzene Examined by Atomic Force Microscopy Presenter: Scott Barrett Texas State University
3	Synthesis of pure magnesium nanoparticles in Triton X Presenter: Stephen Blissett University of Arkansas at Little Rock
4	A Comparative Microscopic Assessment on Aeroallergen of Two Cities, Amarillo and Albuquerque Presenter: Beatriz Burciaga West Texas A&M University
5	Nanowire Manipulation in SEM: Theory and Practice Using Single Probe for Nano Precision Engineering Presenter: Ujjwal Dhakal Texas State University
6	Microscopic Assessment of the Genetic Stability from Karyotyping the <i>in vitro</i> Regenerated Trees and Medicinal and Ornamental Plant Species Presenter: Shaily Goyal West Texas A&M University
7	Synthesis of TeC₂ NP by Pulsed Laser Ablation in Liquids Presenter: Tina Hesabizadeh University of Arkansas at Little Rock
8	Observation of Single-Electron Tunneling in Gold Nanoparticle -DNA- Gold Junction by Electrostatic Force Microscopy Presenter: Rigo Luna Texas State University
9	Angle-Resolved X-Ray Photoelectron Spectroscopy of Spin-Casted Triple Halide Perovskite Presenter: Md Mahamudujjaman Texas State University
10	The Effect of Aluminum Substitution Ratio within Nickel Hydroxide on Structure and Electrochemical Properties of Cathodes for Nickel-Zinc Batteries Presenter: Jaret A. Manley Texas State University

11	<p align="center">Microscopic Assessment of the Water Quality Showing the Presence of Cyanobacteria and use of <i>Daphnia</i> Test System to Detect the Effect of Atrazine</p> <p align="center">Presenter: Anna Nguyen West Texas A&M University</p>
12	<p align="center">Microscopic Analysis on Changes in Indoor and Outdoor Air Quality in Relation to Insect Population as a Potential Cause of Allergic Reactions</p> <p align="center">Presenter: Marytrinh Nguyen West Texas A&M University</p>
13	<p align="center">Assessing the Toxicity of Perfluorooctanoic Acid, and Perfluorobutanoic Acid in Human Gut and Neuronal Cell using CLSM and SEM</p> <p align="center">Presenter: Precious Obiako and Solomon Ayisire Baylor University</p>
14	<p align="center">Synthesis of Selenium Nanoneedles by Pulsed Laser Ablation in Methanol</p> <p align="center">Presenter: Atikur Rahman University of Arkansas at Little Rock</p>
15	<p align="center">Optimization of HFCVD Diamond Growth Parameters using Bayesian Algorithm: Insights from SEM Imaging</p> <p align="center">Presenter: Ron Saha Texas State University</p>
16	<p align="center">Innovative Growth and Processing Strategies to Optimize Structural Properties of Gan Buffer Layer in Gan/Algan Hemts</p> <p align="center">Presenter: Istiaq Firoz Shiam Texas State University</p>
17	<p align="center">Co-Localization Analysis: Does PAX6 Bind Cytoskeletal Elements?</p> <p align="center">Presenter: Nisa Sindhi Texas State University</p>
18	<p align="center">Synthesis of Bi₂Te₃ Quantum Dots by Pulsed Laser Ablation in Liquids</p> <p align="center">Presenter: Rajendra Subedi University of Arkansas at Little Rock</p>
19	<p align="center">Diamond Growth on β-Gallium Oxide (β-Ga₂O₃) Using Aluminum Nitride (AlN) Interlayer for Thermal Management</p> <p align="center">Presenter: Maria Sultana Texas State University</p>

Poster Awards for Material and Life Sciences:

You will find two stickers on the back of your name tag. One is labeled "MS" (=Material Sciences) and the other one is labeled "LS" (=Life Sciences). Please place your stickers on two different posters that fulfill the following criteria in the categories Material and Life Sciences the best:

- High quality of micrographs
- Excellent choice of methods/experimental design
- Excellent microscopic work
- High quality of submitted abstract
- High originality of the poster

The poster with the most stickers in each category will be the winner of the poster award